

REMARKS/ARGUMENTS

This communication is in response to the Non Final Office Action dated September 9, 2008. Claims 25-43, 45 and 46 have been withdrawn from consideration. Claims 24 and 44 have been canceled, without prejudice and the subject matter incorporated into independent claim 23. Claim 23 has been amended. New dependent claims 47 and 48 have been added. No new matter has been added. Claims 23, 25-43, 45-48 remain pending in this application with claim 23 being the only independent claim. Reconsideration is respectfully requested in view of the amendments above and arguments presented.

Rejection under 35 U.S.C. §112, second paragraph

Claims 23, 24 and 44 are rejected under 35 U.S.C. §112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, in claim 23 the Examiner identifies the phrase "a transmission ratio of a lever arm into a multiple of the reaction force applied" as vague and indefinite. Applicant has amended claim 23 for clarification. The limitation in claim 23 has been amended to read:

"springs (7) contact a spring support surface (35) of a tubular ring shape projection (104) of the piston (4), along its inner periphery the tubular ring shape projection (104) of the piston (4) defining a first chamfer (25) having a slope less than approximately 7 degrees in a radial inward direction on which the locking balls (21) contact at a first position (24) when in the locked position; when in the locked position, the locking balls (21) contact the outer periphery of the retractable nipple (3) at a second position (23) and contact the lower side of the cover (2) at a third position (22),

wherein the locking balls (21) transfer the spring force exerted by the springs (7) to the tubular ring shaped projection (104) of the piston (4) at the first position (24) along the first chamfer (25); the spring force, in turn, being transferred at the first position (24) of the piston (4) via a first lever arm (102) to the third position (22) along the bottom periphery of the cover (2) while also forming a second lever arm (103) that terminates along the outer periphery of the retractable nipple (3) with the locking balls (21) supported at the second position (23); the

locking balls (21) forming a lever (29) resulting from the first lever arm (102) and the second lever arm (103) so as to transfer the spring force of the springs (7) at the first position (24) with a predetermined transmission ratio to the second position (23) on the outer periphery of the retractable nipple (3).”

Support for the amendment to the claim is found in Figure 1 and paragraphs [0080]-[0081] of the application, as originally filed.

In addition, the Examiner also identified the phrase “with a slope smaller than an automatic locking threshold” in claim 23 as vague and indefinite. Claim 23 has been amended and the phrase “automatic locking threshold” by the phrase “wherein the first chamfer (25) has a slope less than 7 degrees.”

Regarding claim 24 the Examiner asserts “it is unclear if the ‘another ball position’ (contact of ball with cover) is the same or different from the ‘third ball position’ (contact of ball with nipple) since the ball contacts both the cover and the nipple at the same time.” (September 9, 2008 Non-Final Office Action: p. 2, ll. 10-13) Claims 24 and 44 have been canceled and the subject matter incorporated into independent claim 23. To overcome the outstanding rejections under 35 U.S.C. §112, second paragraph, claim 23 refers to the different ball positions consecutively as “first”, “second” and “third.”

No new matter has been added.

Withdrawal of the claim rejections under 35 U.S.C. §112, second paragraph, in view of the amendments to the claims is respectfully requested.

Prior Art Rejections

Claims 23, 24 and 44 are rejected under 35 U.S.C. §103(a) as obvious over Weskamp et al. (U.S. Patent No. 4,906,123).

Applicant respectfully traverses the prior art rejections for the reasons provided below.

Independent Claim 23

Claim 23 calls for “springs (7) contact a spring support surface (35) of a tubular ring shape projection (104) of the piston (4), along its inner periphery the tubular ring shape

projection (104) of the piston (4) defining a first chamfer (25) having a slope in a radial inward direction on which the locking balls (21) contact at a first position (24) when in the locked position.” (emphasis added) In contrast, Weskamp et al. discloses (Figure 1) that in the locked position the balls 102 contact a vertical section (zero slope) of the inner periphery of the sleeve 106, rather than a “first chamfer (25) having a slope in a radial inward direction,” as found in claim 23.

In addition, claim 23 states “wherein the locking balls (21) transfer the spring force exerted by the springs (7) to the tubular ring shaped projection (104) of the piston (4) at the first position (24) along the first chamfer (25); the spring force, in turn, being transferred at the first position (24) of the piston (4) via a first lever arm (102) to the third position (22) along the bottom periphery of the cover (2) while also forming a second lever arm (103) that terminates along the outer periphery of the retractable nipple (3) with the locking balls (21) supported at the second position (23); the locking balls (21) forming a lever (29) resulting from the first lever arm (102) and the second lever arm (103) so as to transfer the spring force of the springs (7) at the first position (24) with a predetermined transmission ratio to the second position (23) on the outer periphery of the retractable nipple (3).” (emphasis added)

As acknowledged in the specification the lever (29) is created as a result of the specific arrangement of the spring (7) relative to the piston (4). “The mechanical advantage of the lever is achieved by urging the springs 7 initially against the bottom side of the piston 4 in the region of the spring support surface 35.” {paragraph [0080]} The specific arrangement of the spring relative to the piston is expressly disclosed in the specification in Figure 1 and paragraphs [0064]-[0065]. This arrangement is also found in claim 28 which has been distinguished over the prior art of record below. Since the spring (138) as taught by Weskamp et al. is not arranged relative to the piston as expressly described in the specification, figures and claim 28 of the present application, Applicant submits that the Weskamp et al. disclosure would not inherently produce the “first lever arm”, “second lever arm” or “lever” as found in claim 23. If the Examiner disagrees, Applicant’s request that he establish how the different arrangement of the spring (138) relative to the sleeve (106) as taught by Weskamp et al. would nevertheless produce such lever arms (102, 103) and lever (29).

Moreover, independent claim 23, as amended, calls for “a first chamfer (25) having a

slope less than approximately 7 degrees in a radial inward direction.” The Examiner maintains that the inclined forward portion (108) in Weskamp et al. reads on the claimed “first chamfer (25).” Weskamp et al. fails to expressly disclose or suggest the slope of this inclined forward portion, much less, that it must be less than approximately 7 degrees, as found in claim 7. The specified slope of less than approximately 7 degrees is for automatic locking.

Dependent Claim 28

Claim 28 is distinguishable over Weskamp et al. in that it calls for “wherein each spring (7) contacts with a radial outward section a radially outwardly oriented, upper spring support surface (35) on the bottom side of the piston (4) and a radially outwardly oriented lower spring support surface (36) of the spring support (6).” In contrast, Figure 1 of Weskamp et al. discloses that sleeve (106) has a radial outward section that the seal (112) contacts, but the spring (138) does not contact at all, as required by claim 28. Instead the spring (138) in Weskamp et al. is confined between the parallel walls of the sleeve (106) without contacting the radial outward section of the sleeve (106).

New Dependent Claim 47

Support for the subject matter added to claim 47 was previously found in claim 23. No new matter has been added. Claim 47 depends from claim 23 and thus is distinguishable over the prior art of record for at least the reasons discussed above with respect to claim 23.

New Dependent Claim 48

Support for the subject matter of new dependent claim 48 is found in paragraphs [0022, 0023 & 0026] of the specification of the present application. No new matter has been added.

Claim 48 depends from claim 23 and thus is distinguishable over the prior art of record for at least the reasons discussed above with respect to claim 23. In addition, claim 48 specifies “wherein the locking balls (21) are elastically deformable.” The elastic deformability of the locking balls in the present invention is advantageous in that it automatically centers the ball in the region of the three-point support of the retractable nipple thereby compensating for manufacturing tolerances of the clamping system. Weskamp et al. fails to disclose or suggest

that the balls (102) are elastically deformable.

For at least the foregoing reasons applicant submits that claims 23, 28, 47 and 48 are patentable over the prior art of record. Claims 25-27, 29-43, 45 and 46 depend from independent claim 23 and thus are patentable over the prior art of record for at least the same reasons discussed above with respect to claim 23.

If independent claim 23 is allowed, Applicant requests that the Examiner withdraw the restriction requirement and consider previously withdrawn claims 23, 25-43, 45 and 46 since they depend from independent claim 23.

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CONDITIONAL PETITION FOR EXTENSION OF TIME

If entry and consideration of the amendments above requires an extension of time, Applicants respectfully request that this be considered a petition therefor. The Assistant Commissioner is authorized to charge any fee(s) due in this connection to Deposit Account No. 14-1263.

ADDITIONAL FEE

Please charge any insufficiency of fees, or credit any excess, to Deposit Account No. 14-1263.

Respectfully submitted,
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